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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,011	10/24/2003	Alex C. Toy	1023-286US01	9361

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EXAMINER
HOLMES, REX R

ART UNIT	PAPER NUMBER
3762	

MAIL DATE	DELIVERY MODE
10/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/693,011	TOY ET AL.	
	Examiner	Art Unit	
	Rex Holmes	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/7/07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,21 and 23-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-10,21 and 23-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-10,21 and 23-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (U.S. Pat. 6,418,346 hereinafter "Nelson") in view of Maoz et al. (U.S. Pub. 2004/0125029 hereinafter "Maoz")

4. In regards to claims 1-4, Nelson discloses a programmer for an implanted medical device with a telemetry antenna on an antenna driver circuit board (column 11,

lines 52-55) and a display screen on a graphics circuit (column 12, lines 15-18) but does not disclose that the antenna is an internal antenna, nor that the antenna circuit is explicitly separate from the graphics circui, nor a substantially contiguous ground plane layer interrupted by a plurality of outwardly extending gaps to disrupt the flow of eddy currents, nor that the ground plane regions defined by these gaps are interconnected. However, Maoz discloses an internal antenna (10), a ground plane layer (e.g. ¶ 10), a plurality of gaps (53a, 53b) and a display on a separate board (4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the programmer as taught by Nelson, with programmer with an internal antenna and gaps on the circuit board that is separate from the display circuit as taught by Maoz, since such a modification would provide the predictable result of a programmer with an internal antenna and a ground plane layer that is disrupted by gaps for providing increased power without internal noise.

5. It is noted that the specification of Maoz does not explicitly say that the circuit board (4) explicitly contains a display, but figure 1 clearly shows a display on circuit board (4) that is separate from the internal antenna (10).

6. Regarding claim 21, Nelson in view of Maoz disclose the claimed invention except for gap width. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the gap as taught by Nelson in view of Maoz, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Maoz as applied to claim 1 above, and further in view of Stein et al. (U.S. Pub. 2004/0230246 hereinafter "Stein").

8. Regarding claims 9 and 10, Nelson in view of Maoz discloses the claimed invention except for the battery bay being formed within a loop-like antenna. Stein teaches that it is known to use the antenna loop as the basis for the battery bay as set forth in figure 9 elements 66 and 76 to provide noise immunity from external intereference. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the circuit board as taught by Stein in view of Maoz, with the antenna loop battery bay as taught by Stein, since such a modification would provide the circuit board with location and design for the antenna for providing noise immunity.

9. Claims 5-8, 23-29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Maoz as applied to claim 1 above, and further in view of Carbunaru et al. (U.S. Pub. 2004/0098068 hereinafter "Carbunaru").

10. In regards to claims 5-6 and 23-27, Nelson in view of Maoz discloses a programmer for an implanted medical device with an internal telemetry antenna on an antenna driver circuit board, display screen on a graphics circuit, and a substantially contiguous ground plane layer interrupted by a plurality of outwardly extending gaps, but Nelson in view of Maoz fails to disclose that the first circuit board contains a first or second electrostatic layer. However Carbunaru discloses that printed circuit boards that are untilized in medical devices may contain electrostatic discharge layers built into

them (e.g. ¶ 10). Both Nelson in view of Maoz and Carbunaru teach of medical devices with telemetry systems and antennas and thus teach analogous arts. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the circuit board of Nelson in view of Maoz, with a printed circuit board with a static discharge layer as taught by Carbunaru since it would provided the device with a protection circuit to prevent circuit failure due to electrostatic discharge. Since the layers are throughout the entire circuit board then it would be obvious that the electrostatic discharge layer would be the approximate size and shape of the antenna.

In regards to claims 7-8, 28 and 29, Nelson in view of Maoz and further in view of Carbunaru teach that the circuit board that makes up the device has electrostatic discharge layers. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the circuit board as taught by Nelson in view of Maoz and further in view of Carbunaru with the dual layers of electrostatic discharge, because Applicant has not disclosed that dual layers provides an advantage, is used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a single layer as taught by Nelson in view of Maoz and further in view of Carbunaru, because it provides for protection against electrostatic discharge and since it appears to be an arbitrary design consideration which fails to patentably distinguish over Nelson in view of Maoz and further in view of Carbunaru.

Therefore, it would have been an obvious matter of design choice to modify circuit board to obtain the invention as specified in the claim(s).

11. In regards to claim 32, Nelson in view of Maoz and further in view of Carbunaru disclose the claimed invention except for gap width. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the gap as taught by Nelson in view of Maoz and further in view of Carbunaru, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

12. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Maoz in view of Carbunaru as applied to claim 23 above, and further in view of Stein et al. (U.S. Pub. 2004/0230246 hereinafter "Stein").

13. In regards to claims 30 and 31, Nelson in view of Maoz in view of Carbunaru disclose the claimed invention except for the battery bay being formed within a loop-like antenna. Stein teaches that it is known to use the antenna loop as the basis for the battery bay as set forth in figure 9 elements 66 and 76 to provide noise immunity from external intereference. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the circuit board as taught by Stein in view of Maoz in view of Carbunaru, with the antenna loop battery bay as taught by Stein, since such a modification would provide the circuit board with location and design for the antenna for providing noise immunity.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ito et al. (7,009,410) – PCB with dual electrostatic discharge layers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rex Holmes whose telephone number is 571-272-8827. The examiner can normally be reached on M-F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rex Holmes
Examiner
Art Unit 3762

George Evanisko
Primary Examiner
Art Unit 3762
10/11/7